CLAIM OR CLAIMS

1. *(original)* A method for differential compression of a body of data S with respect to a body of data T, comprising the steps of:

    initializing a sliding window W of size MAX$\{m,n\}+K$

        so that its rightmost m characters are S,

        where K is an integer such that $0 \leq K < $ MIN$\{m,n\}$;

    performing sliding window compression of T with window W,

        to produce a sequence of pointers,

        where each of said pointers represents a single character

        or represents a copy of an earlier substring of T

        or represents a copy of a substring of S,

        such that at least one of said pointers represents a copy of a substring of S;

    transmitting each pointer of said sequence of pointers to a utilization device

        that contains a copy of S;

    upon receiving each of said pointers at said utilization device,

        performing an additional sliding window decoding step in the recovery of T,

        in such a way that the size of the memory used is no more than MAX$\{m,n\} + K$,

        and such that after the last pointer is received T is fully recovered.

2. *(original)* A method according to Claim 1, further comprising the step of:

        Rearranging substrings of S to that S is better aligned with T.

3. *(original)* A method according to Claim 1 where $K \leq$ MIN$\{m,n\}/2$.

4. *(original)* A method according to Claim 1 where K is $O(\sqrt{\text{MIN}\{m,n\}})$.

5. *(original)* A method according to Claim 1 where $K=0$.

1   **6.** *(original)* A method for representing a first body of data T of size n by a second body of data

2   S of size m and a sequence of pointers,

3   where each of said pointers represents a single character or represents a copy of an earlier

4   substring of T or represents a copy of a substring of S,

5   such that at least one of said pointers represents a copy of a substring of S,

6   so that it is possible to recover T from S by processing said sequence of pointers

7   and overwriting S from left to right,

8   in such a way that the size of the memory used is no more than MAX$\{m,n\} + K$,

9   where K is an integer such that $0 \le K < \text{MIN}\{m,n\}$.

10   **7.** *(original)* A method according to Claim 6, further comprising the step of:

11   Rearranging substrings of S to that S is better aligned with T.

12   **8.** *(original)* A method according to Claim 6 where $K \le \text{MIN}\{m,n\}/2$.

13   **9.** *(original)* A method according to Claim 6 where K is $O(\sqrt{\text{MIN}\{m,n\}})$.

14   **10.** *(original)* A method according to Claim 6 where $K=0$.

15   **11.** *(original)* A method of recovering a first body of data T of size n from a second body of data S of

16   size m and a sequence of pointers, where each of said pointers represents a single character or

17   represents a copy of an earlier substring of T or represents a copy of a substring of S,

18   such that at least one of said pointers represents a copy of a substring of S,

19   by processing said sequence of pointers and overwriting S from left to right,

20   in such a way that the size of the memory used is no more than MAX$\{m,n\} + K$,

21   where K is an integer such that $0 \le K < \text{MIN}\{m,n\}$.

22   **12.** *(original)* A method according to Claim 11, further comprising the step of:

23   Rearranging substrings of S to that S is better aligned with T.

24   **13.** *(original)* A method according to Claim 11 where $K \le \text{MIN}\{m,n\}/2$.

25   **14.** *(original)* A method according to Claim 11 where K is $O(\sqrt{\text{MIN}\{m,n\}})$.

26   **15.** *(original)* A method according to Claim 11 where $K=0$.

1   **16.** *(amended)* A system for differential compression of a body of data S with respect to a body

2   of data T, comprising:

3   means for initializing a sliding window W of size MAX$\{m,n\}+K$

4   so that its rightmost m characters are S,

5   where K is an integer such that $0 \leq K < $ MIN$\{m,n\}$;

6   means for performing sliding window compression of T with window W,

7   to produce a sequence of pointers,

8   where each of said pointers represents a single character

9   or represents a copy of an earlier substring of T

10   or represents a copy of a substring of S,

11   such that at least one of said pointers represents a copy of a substring of S;

12   means for transmitting each pointer of said sequence of pointers to a utilization device

13   that contains a copy of S;

14   means for upon receiving each of said pointers at said utilization device,

15   performing an additional sliding window decoding step in the recovery of T,

16   in such a way that the size of the memory used is no more than MAX$\{m,n\} + K$,

17   and such that after the last pointer is received T is fully recovered.

18   **17.** *(amended)* A system as in Claim 16, further comprising:

19   Rearranging substrings of S to that S is better aligned with T.

20   **18.** *(amended)* A system according to Claim 16 where $K \leq $ MIN$\{m,n\}/2$.

21   **19.** *(amended)* A system according to Claim 16 where K is $O(\sqrt{\text{MIN}\{m,n\}})$.

22   **20.** *(amended)* A system according to Claim 16 where $K=0$.

1 **21.** *(original)* A system for recovering a first body of data T of size n from a second body of data

2 S of size m and a sequence of pointers,

3 where each of said pointers represents a single character or represents a copy of an earlier

4 substring of T or represents a copy of a substring of S,

5 such that at least one of said pointers represents a copy of a substring of S,

6 with means for:

7   processing said sequence of pointers and overwriting S from left to right,

8   in such a way that the size of the memory used is no more than $\text{MAX}\{m,n\} + K$.

9 **22.** *(amended)* A system as in Claim 21, further comprising:

10   Rearranging substrings of S to that S is better aligned with T.

11 **23.** *(amended)* A system for differential compression and decompression of a body of data T

12   with respect to a body of data S comprising means for:

13   computing strongly aligned moves and using off-the-shelf compression and

14   decompression to represent the portions of T not represented by substring moves within

15   S, in such a way that the size of the memory used when decoding is no more than

16         $\text{MAX}\{m,n\} + K$, where K is an integer such that $0 \leq K < \text{MIN}\{m,n\}$.

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